

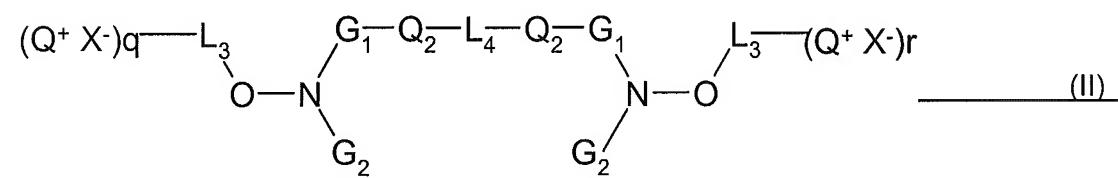
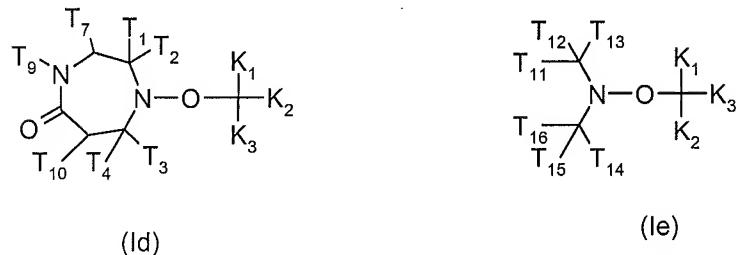
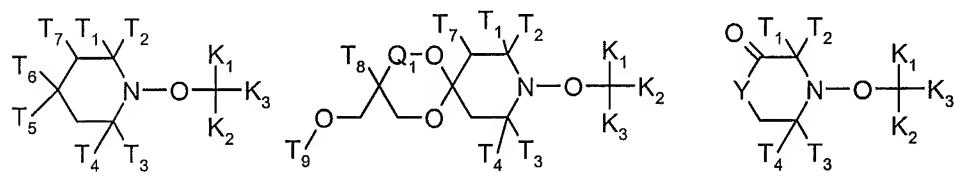
In the Claims:

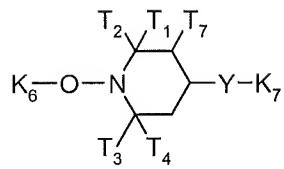
1-10. (cancelled)

11. (currently amended) A process for preparing a monomer/polymer clay nanocomposite dispersion comprising the steps of

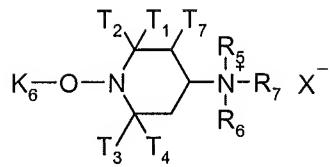
A) providing a first aqueous dispersion of a natural or synthetic clay which can be partially intercalated and/or exfoliated and wherein said clay has an exchangeable cation; adding to said dispersion a compound of formula Ia, Ib, Ic, Id, Ie, II, IIIa, IIIb, IIIc, IIId, IIIe, IVa, Va, Vb, Vc, Vd or Ve and exchanging said cation at least partially and a compound according to claim 1 or
~~a compound of formula IIIa, IIIb, IIIc, IIId, IIIe, IVa, Va, Vb, Vc, Vd or Ve~~
B) adding to said dispersion at least one ethylenically unsaturated monomer and polymerizing at least a portion of said ethylenically unsaturated monomer,

wherein formula Ia, Ib, Ic, Id, Ie, II, IIIa, IIIb, IIIc, IIId, IIIe, IVa, Va, Vb, Vc, Vd and Ve are

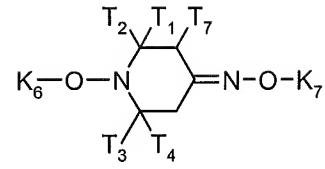




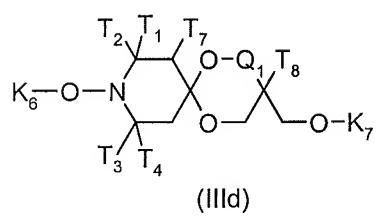
(IIIa)



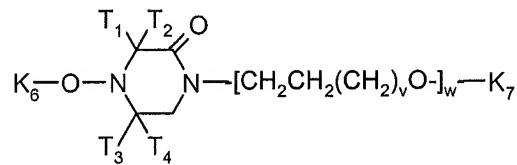
(IIIb)



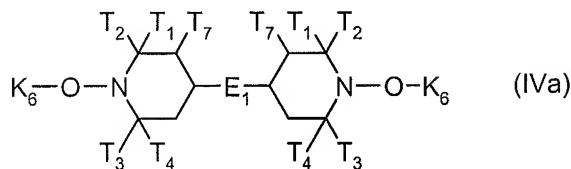
(IIIc)



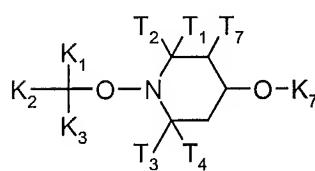
(IIId)



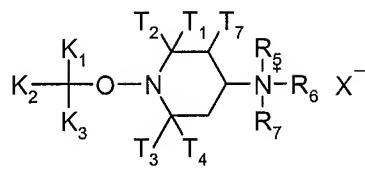
(IIIe)



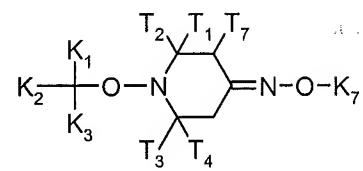
(IVa)



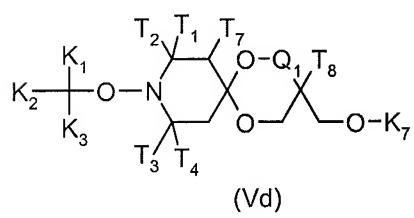
(Va)



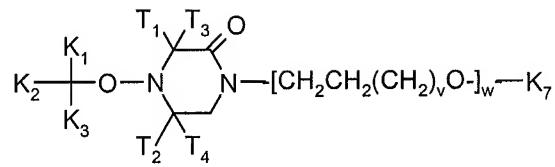
(Vb)



(Vc)



(Vd)



(Ve)

wherein

T_1 , T_2 , T_3 and T_4 are independently methyl or ethyl with the proviso that at least one is ethyl;

T_5 and T_6 are hydrogen or

T_5 and T_6 together are a group $=O$, $=NOH$, $=NO-T_9$ or

T_5 is hydrogen and T_6 is $-O-T_9$ or $-NR_9-T_9$

T_9 is hydrogen, R_9 or $-C(O)-R_9$;

T_7 is hydrogen or methyl;

Q_1 is a direct bond or a $-CH_2-$ group; wherein

if Q_1 is a direct bond, T_8 is hydrogen, and

if Q_1 is $-CH_2-$, T_8 is methyl or ethyl;

T_{10} is hydrogen or methyl;

T_{11} , T_{12} , T_{13} , T_{14} , T_{15} and T_{16} independently are C_1-C_{18} alkyl, C_3-C_{18} alkenyl, C_3-C_{18} alkinyl,

C_5-C_{12} cycloalkyl, phenyl or C_7-C_9 phenylalkyl; or

T_{11} is hydrogen and T_{12} is a group $-P(O)(OC_2H_5)_2$ and the others are as defined above;

or T_{11} and T_{14} are a group $-CH_2-O-T_9$ and the others are as defined above; or

T_{16} is a group $-C(O)-Y-R_5$ and the others are as defined above; or

T_{11} , T_{12} and T_{13} are a group $-CH_2OH$;

Y is O or NR_9 ;

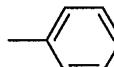
Q_4 is a direct bond or a $-CH_2-$ group; wherein

if Q_4 is a direct bond, T_8 is hydrogen, and

if Q_4 is $-CH_2-$, T_8 is methyl or ethyl;

v is a number from 0 to 10 and w is 0 or 1;

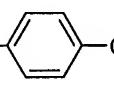
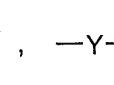
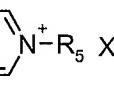
K_1 and K_2 are hydrogen, C_1-C_{18} alkyl, C_5-C_{12} cycloalkyl, phenyl or C_7-C_9 phenylalkyl and

K_3 is a group $-COK_4$ or  where

K_4 is $Y-[(CH_2-CH_2)-(CH_2)_s-N^+ R_5R_6 X]_t-CH_2-CH_2-(CH_2)_s-N^+ R_5R_6R_7 X^-$ or

$-Y-CH_2-CHOH-CH_2-N^+ R_5R_6 X^--[(CH_2-CH_2)-(CH_2)_s-N^+ R_5R_6 X]_t-CH_2-CH_2-(CH_2)_s-N^+ R_5R_6R_7 X^-}_u$,

where s and t are each a number from 0-4 and u is 1; or

K_4 is a group  ,  or  or

Z is $-\text{C}(\text{O})-$ or a direct bond, wherein

if Z is $-\text{C}(\text{O})-$, K_5 has the meaning of K_4 , and

if Z is a direct bond, K_5 is

$\text{O}-\text{CH}_2-\text{CHOH}-\text{CH}_2-\text{N}^+ \text{R}_5\text{R}_6 \text{X}^- \cdot \{[(\text{CH}_2-\text{CH}_2)-(\text{CH}_2)_s-\text{N}^+ \text{R}_5\text{R}_6 \text{X}^-]_t-\text{CH}_2-\text{CH}_2-(\text{CH}_2)_s-\text{N}^+ \text{R}_5\text{R}_6\text{R}_7 \text{X}^- \}_u, \text{Q}^+ \text{X}^-$,
 $-\text{CH}_2\text{Q}^+ \text{X}^-$ or $-\text{CHCH}_3\text{Q}^+ \text{X}^-$;

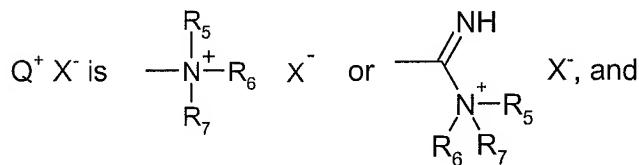
K_7 is a group

$-\text{CH}_2-\text{CHOH}-\text{CH}_2-\text{N}^+ \text{R}_5\text{R}_6 \text{X}^- \cdot \{[(\text{CH}_2-\text{CH}_2)-(\text{CH}_2)_s-\text{N}^+ \text{R}_5\text{R}_6 \text{X}^-]_t-\text{CH}_2-\text{CH}_2-(\text{CH}_2)_s-\text{N}^+ \text{R}_5\text{R}_6\text{R}_7 \text{X}^- \}_u$,

where s and t are each a number from 0-4 and u is 1; or a group $-\text{D}_1-\text{Q}^+ \text{X}^-$ where

D_1 is C_1-C_{12} alkylene, C_1-C_{12} alkylene which is interrupted by one or more O, S, or NR_9 atoms,

C_5-C_{12} cycloalkylene or phenylene;



R_1 is C_1-C_{18} alkylene,

R_2 is a direct bond or C_1-C_{18} alkylene,

R_3 is hydrogen or C_1-C_{18} alkyl,

R_4 is hydrogen or C_1-C_{18} alkyl,

R_5 , R_6 and R_7 are each independently of the others hydrogen, C_1-C_{18} alkyl, C_3-C_{12} cycloalkyl, phenyl or C_7-C_9 phenylalkyl or C_6-C_{10} heteroaryl, which all may be unsubstituted or substituted by halogen, OH, NO_2 , CN, C_1-C_4 alkoxy, or

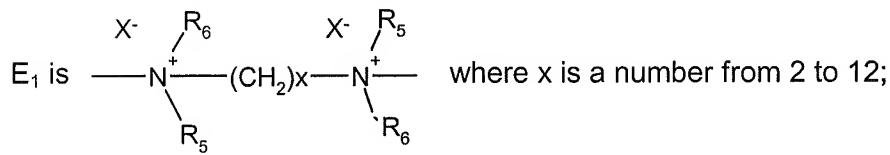
R_5 , R_6 and R_7 together with the nitrogen or phosphorous atom to which they are bonded form a 3-12 membered monocyclic or polycyclic ring which may contain further heteroatoms;

R_9 is hydrogen, C_1-C_{18} alkyl, C_3-C_{18} alkenyl, C_3-C_{18} alkinyl, phenyl, C_7-C_9 phenylalkyl, which all may be unsubstituted or substituted by one or more hydroxy, halogen or C_1-C_4 alkoxy groups

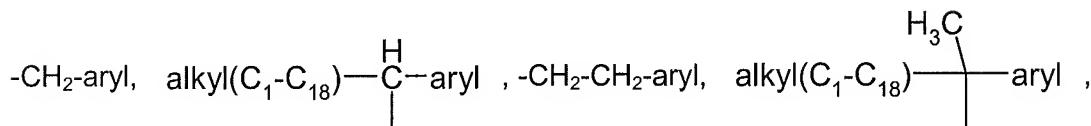
R_{22} is C_1-C_{18} alkyl;

X^- is the anion of a C_1-C_{18} carboxylic acid which may contain more than one carboxylic acid group, fluoride, chloride, bromide, iodide, nitrite, nitrate, hydroxide, acetate, hydrogen sulfate, sulfate, C_1-C_{18} alkoxy sulfate, aromatic or aliphatic sulfonate, carbonate, hydrogen carbonate,

perchlorate, chlorate, tetrafluoroborate, borate, phosphate, hydrogen phosphate, dihydrogen phosphate or mixtures thereof;

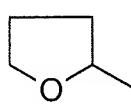
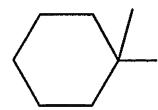
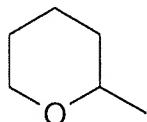


K_6 is selected from the group consisting of

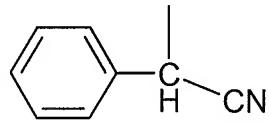


$(\text{C}_5\text{-C}_6\text{cycloalkyl})_2\text{CCN}$, $(\text{C}_1\text{-C}_{12}\text{alkyl})_2\text{CCN}$, $-\text{CH}_2\text{CH}=\text{CH}_2$, $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-C(O)-(C}_1\text{-C}_{12})\text{alkyl}$,
 $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-C(O)-(C}_6\text{-C}_{10})\text{aryl}$, $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-C(O)-(C}_1\text{-C}_{12})\text{alkoxy}$,
 $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-C(O)-phenoxy}$, $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-C(O)-N-di(C}_1\text{-C}_{12})\text{alkyl}$,
 $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-CO-NH(C}_1\text{-C}_{12})\text{alkyl}$, $(\text{C}_1\text{-C}_{12})\text{alkyl-}\text{CR}_{30}\text{-CO-NH}_2$, $-\text{CH}_2\text{CH}=\text{CH-CH}_3$,

$-\text{CH}_2\text{-C(CH}_3\text{)=CH}_2$, $-\text{CH}_2\text{-CH=CH-phenyl}$, $-\text{CH}_2\text{-C}\equiv\text{CH}$, 3-cyclohexenyl, 3-cyclopentenyl,



and



, wherein

R_{30} is hydrogen or $\text{C}_1\text{-C}_{12}\text{alkyl}$;

the alkyl groups are unsubstituted or substituted with one or more $-\text{OH}$, $-\text{COOH}$ or $-\text{C(O)R}_{30}$ groups; and

the aryl groups are phenyl or naphthyl which are unsubstituted or substituted with $\text{C}_1\text{-C}_{12}\text{alkyl}$, halogen, $\text{C}_1\text{-C}_{12}\text{alkoxy}$, $\text{C}_1\text{-C}_{12}\text{alkylcarbonyl}$, glycidyloxy, OH, $-\text{COOH}$ or $-\text{COO}(\text{C}_1\text{-C}_{12})\text{alkyl}$

B) adding to said dispersion at least one ethylenically unsaturated monomer and polymerizing at least a portion of said ethylenically unsaturated monomer.

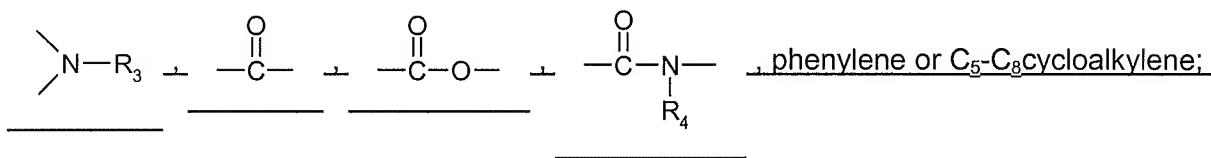
and wherein in formula II

G_1 and G_2 independently represent a tertiary carbon atom to which an unsubstituted $\text{C}_1\text{-C}_{18}\text{alkyl}$ or phenyl or with CN, $\text{COC}_1\text{-C}_{18}\text{alkyl}$, CO-phenyl, $\text{COOC}_1\text{-C}_{18}\text{alkyl}$, $\text{OC}_1\text{-C}_{18}\text{alkyl}$, NO_2 , $\text{NHC}_1\text{-C}_{18}\text{alkyl}$ or $\text{N}(\text{C}_1\text{-C}_{18})_2\text{alkyl}$ substituted alkyl or phenyl groups are bonded; or one of

G₁ and G₂ is a secondary carbon atom to which a group -P(O)(OR₂₂)₂ is bonded and the other is as defined above; or

G₁ and G₂ together with the nitrogen atom to which they are bonded form a 5 to 8 membered heterocyclic ring or a polycyclic or spirocyclic 5 to 20 membered heterocyclic ring system which is substituted with 4 C₁-C₄alkyl groups or 2 C₅-C₁₂ spirocycloalkyl groups in the ortho position to the nitrogen atom and which may be further substituted with one or more C₁-C₁₈alkyl, C₁-C₁₈alkoxy or =O groups; and which may be interrupted by a further oxygen or nitrogen atom; with the proviso that at least one of the 4 C₁-C₄alkyl groups in ortho position to the nitrogen atom is higher alkyl than methyl;

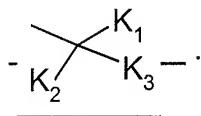
L₄ is a linking group selected from the group consisting of a direct bond, R₁-Y or R₂-C(O)-Y- where Y is attached to G₁ and/or G₂; C₁-C₂₅alkylene, C₂-C₂₅alkylene interrupted by -O-, -S-, -SO-, -SO₂-,



Q₂ is a direct bond, O, NR₅ or NR₅R₆:

L₃ is a group containing at least one carbon atom and is such that the radical ·L₃(Q⁺X⁻) derived from the group is able to initiate polymerization of ethylenically unsaturated monomers; and the group

·L₃(Q⁺X⁻) in formula II is a group



12. (original) A process according to claim 11 wherein the water phase of step A) is at least partially removed before performing step B).

13. (previously presented) A process according to claim 11 wherein the compound is added in an amount of from 1% to 100% by weight, based on the weight of the clay.

14. (previously presented) A process according to claim 11 wherein the ethylenically unsaturated monomer or oligomer is selected from the group consisting of styrene, substituted styrenes, conjugated dienes, acrolein, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles and (alkyl)acrylamides, vinyl halides and vinylidene halides or mixtures thereof.

15. (previously presented) A process according to claim 14 wherein the ethylenically unsaturated monomers are styrene, α -methyl styrene, p-methyl styrene or a compound of formula $\text{CH}_2=\text{C}(\text{R}_a)-(\text{C}=\text{Z})-\text{R}_b$, wherein R_a is hydrogen or $\text{C}_1\text{-}\text{C}_4$ alkyl, R_b is NH_2 , $\text{O}^-(\text{Me}^+)$, glycidyl, unsubstituted $\text{C}_1\text{-}\text{C}_{18}$ alkoxy, $\text{C}_2\text{-}\text{C}_{100}$ alkoxy interrupted by at least one N and/or O atom, or hydroxy-substituted $\text{C}_1\text{-}\text{C}_{18}$ alkoxy, unsubstituted $\text{C}_1\text{-}\text{C}_{18}$ alkylamino, di($\text{C}_1\text{-}\text{C}_{18}$ alkyl)amino, hydroxy-substituted $\text{C}_1\text{-}\text{C}_{18}$ alkylamino or hydroxy-substituted di($\text{C}_1\text{-}\text{C}_{18}$ alkyl)amino, $-\text{O}-\text{CH}_2-\text{CH}_2-\text{N}(\text{CH}_3)_2$ or $-\text{O}-\text{CH}_2-\text{CH}_2-\text{N}^+\text{H}(\text{CH}_3)_2$ An^- ; wherein An^- is an anion of a monovalent organic or inorganic acid; Me is a monovalent metal atom or the ammonium ion and Z is oxygen or sulfur.

16. (original) A process according to claim 11 wherein an acid containing unsaturated monomer is added, which is selected from the group consisting of methacrylic anhydride, maleic anhydride, itaconic anhydride, acrylic acid, methacrylic acid, itaconic acid, maleic acid, fumaric acid, acryloxypropionic acid, (meth)acryloxypropionic acid, styrene sulfonic acid, ethylmethacrylate-2-sulphonic acid, 2-acrylamido-2-methylpropane, sulphonic acid; phosphoethylmethacrylate; the corresponding salts of the acid containing monomer, and combinations thereof.

17. (original) A process according to claim 11 wherein step B) is repeated with a second ethylenically unsaturated monomer which is different from the first one, leading to a block copolymer.

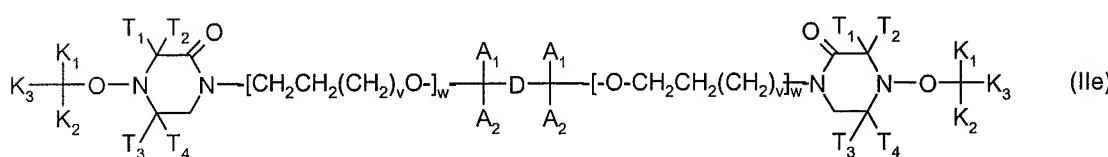
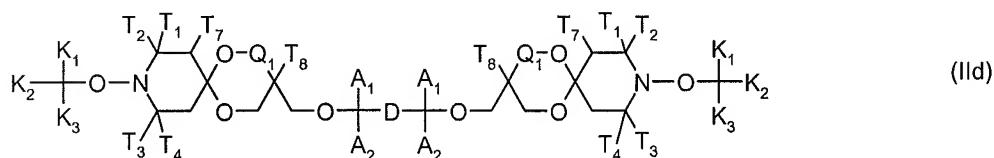
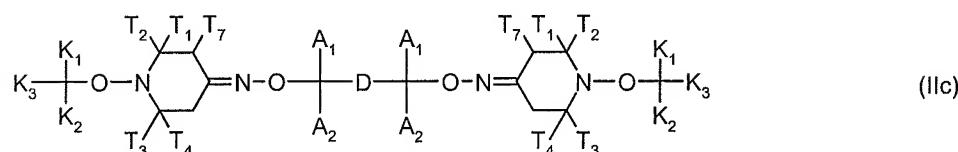
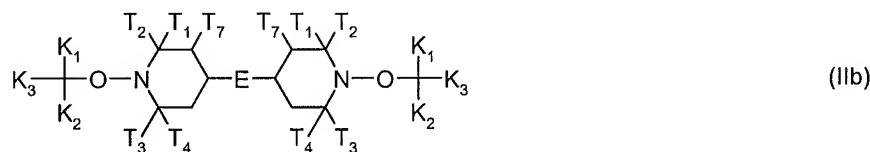
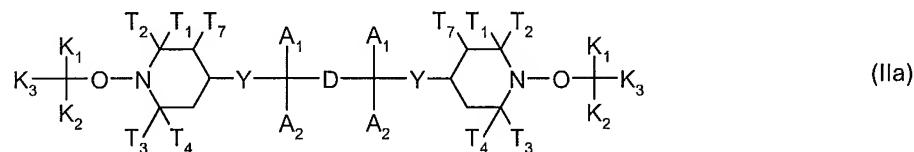
18. (previously presented) A process according to claim 11 wherein the natural or synthetic clay is selected from the group consisting of montmorillonite, saponite, beidellite, montronite, hectorite, stevensite, vermiculite, kaolinite, hallosite, synthetic phyllosilicates, and combinations thereof.

19. (previously presented) A monomer/polymer clay nanocomposite dispersion obtained by a process according to claim 11.

20-22. (cancelled)

23. (previously presented) A method of improving the properties of paints, coatings, inks, adhesives, reactive diluents or thermoplastic materials which comprises incorporating a monomer/polymer clay nanocomposite dispersion according to claim 19 therein.

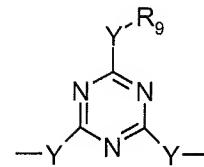
24. (new) A process according to claim 11 wherein the compound of formula Ia, Ib, Ic, Id, Ie, II, IIIa, IIIb, IIIc, IIId, IIIe, IVa, Va, Vb, Vc, Vd or Ve is a compound of formula IIa, IIb, IIc, IIId or IIe



wherein A₁ and A₂ are independently hydrogen or together with the carbon atom to which they are bonded form a carbonyl group, -C(O)-;

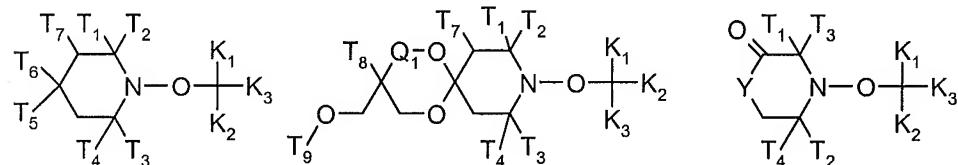
D is a direct bond or C_1 - C_{12} alkylene, C_1 - C_{12} alkylene which is interrupted by one or more O, S, or NR_9 atoms, C_5 - C_{12} cycloalkylene or phenylene;

E is a group $-\text{NR}_9-(\text{CH}_2)_x-\text{NR}_9-$ where x is a number from 2 to 12, or a group



v is a number from 0 to 10 and w is 0 or 1.

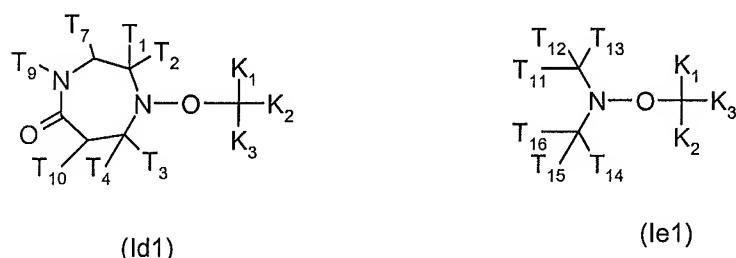
25. (new) A process according to claim 11 wherein the compound of formula Ia, Ib, Ic, Id, Ie, II, IIIa, IIIb, IIIc, IIId, IIIe, IVa, Va, Vb, Vc, Vd or Ve is a compound of formula Ia1, Ib1, Ic1, Id1 or Ie1



(Ia1)

(Ib1)

(Ic1)



(Id1)

(Ie1)

wherein

Q₁ is a direct bond or CH₂;

T₁ and T₃ are ethyl and T₂ and T₄ are methyl;

T₇ is methyl or H; T₁₀ is H if T₇ is methyl and T₁₀ is methyl if T₇ is H;

if Q₁ is a direct bond, T₈ is H;

if Q₁ is CH₂, T₈ is methyl or ethyl;

T₁₁, T₁₂, T₁₃, T₁₄, T₁₅ and T₁₆ are independently methyl or ethyl; or

T₁₁ is H, T₁₂ is isopropyl, T₁₃ is phenyl and T₁₄, T₁₅, and T₁₆ are methyl; or

T₁₁ is H, T₁₂ is $-\text{P}(\text{O})(\text{OC}_2\text{H}_5)_2$, T₁₃ is t-butyl and T₁₄, T₁₅, and T₁₆ are methyl; or

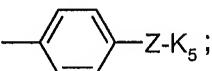
T₁₁ and T₁₄ are $-\text{CH}_2\text{O}-\text{T}_9$ and T₁₂ and T₁₅ are methyl or phenyl and T₁₃ and T₁₆ are methyl or ethyl; or

T₁₁, T₁₂, T₁₃, T₁₄, T₁₅ are methyl and T₁₆ is a group $-\text{CO}-\text{O}-\text{R}_9$ or $-\text{CON}(\text{R}_9)_2$; or

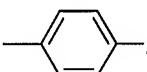
T₁₁, T₁₂ and T₁₃ are $-\text{CH}_2\text{OH}$, T₁₄ is H, T₁₅ is isopropyl and T₁₆ phenyl;

T_9 is hydrogen, R_9 or $-C(O)-R_9$, where R_9 is hydrogen, C_1-C_{18} alkyl, C_3-C_{18} alkenyl, C_3-C_{18} alkinyl, phenyl or C_7-C_9 phenylalkyl;

K_1 is H, K_2 is methyl or ethyl and

K_3 is a group $-CO-K_4$ or ;

K_4 is $-Y-CH_2-CH_2-(CH_2)_s-N^+X^-R_5R_6R_7$ or; $-Y-CH_2-CHOH-CH_2-N-CH_2-CH_2-(CH_2)_s-N^+X^-R_5R_6R_7$ where Y is O or NR_9 and s is a number from 0 to 2;

if K_3 is , Z is $-CO-$ or a direct bond; and

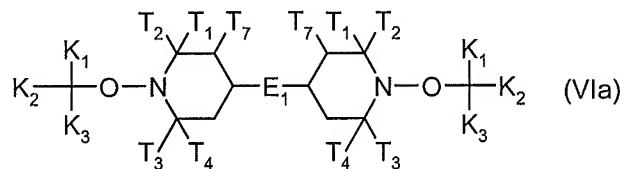
if Z is $-CO-$, K_5 has the same meaning as K_4 ;

if Z is a direct bond, K_5 is a group $-O-CH_2-CHOH-CH_2-N-CH_2-CH_2-(CH_2)_s-N^+X^-R_5R_6R_7$ or $-CH_2N^+R_5R_6R_7 X^-$.

26. (new) A process for preparing a monomer/polymer clay nanocomposite dispersion comprising the steps of

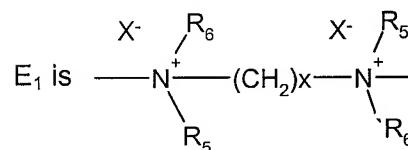
- providing a first aqueous dispersion of a natural or synthetic clay which can be partially intercalated and/or exfoliated and wherein said clay has an exchangeable cation; adding to said dispersion a compound of formula VIa and exchanging said cation at least partially and
- adding to said dispersion at least one ethylenically unsaturated monomer and polymerizing at least a portion of said ethylenically unsaturated monomer,

wherein formula VIa is



T_1 , T_2 , T_3 and T_4 are independently methyl or ethyl with the proviso that at least one is ethyl;

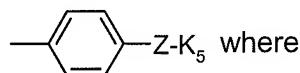
T_7 is hydrogen or methyl;

E_1 is  where x is a number from 2 to 12;

R_5 and R_6 are each independently of the others hydrogen, C_1 - C_{18} alkyl, C_3 - C_{12} cycloalkyl, phenyl or C_7 - C_9 phenylalkyl or C_6 - C_{10} heteroaryl, which all may be unsubstituted or substituted by halogen, OH, NO_2 , CN, C_1 - C_4 alkoxy;

X^- is the anion of a C_1 - C_{18} carboxylic acid which may contain more than one carboxylic acid group, fluoride, chloride, bromide, iodide, nitrite, nitrate, hydroxide, acetate, hydrogen sulfate, sulfate, C_1 - C_{18} alkoxy sulfate, aromatic or aliphatic sulfonate, carbonate, hydrogen carbonate, perchlorate, chlorate, tetrafluoroborate, borate, phosphate, hydrogen phosphate, dihydrogen phosphate or mixtures thereof;

K_1 and K_2 are hydrogen, C_1 - C_{18} alkyl, C_5 - C_{12} cycloalkyl, phenyl or C_7 - C_9 phenylalkyl and

K_3 is a group $-COK_4$ or  where

K_4 is $Y-[[(CH_2-CH_2)-(CH_2)_s-N^+ R_5R_6 X]_t-CH_2-CH_2-(CH_2)_s-N^+ R_5R_6R_7 X^-$ or
 $-Y-CH_2-CHOH-CH_2-N^+ R_5R_6 X^--[[(CH_2-CH_2)-(CH_2)_s-N^+ R_5R_6 X]_t-CH_2-CH_2-(CH_2)_s-N^+ R_5R_6R_7 X^-]_u$,
where s and t are each a number from 0-4 and u is 1; or

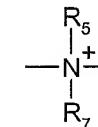
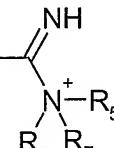
K_4 is a group $-Y-\img alt="Chemical structure of a phenyl group connected to a Q+ X- group" data-bbox="270 450 400 485"/> $Q^+ X^-$, $-Y-\img alt="Chemical structure of a phenyl group connected to an N+ R5 group" data-bbox="450 450 500 485"/> $N^+ R_5 X^-$ or $-N-\img alt="Chemical structure of a 1,4-dihydro-2H-pyridine ring with an N+ R5 group at position 1 and an R6 group at position 4" data-bbox="550 440 600 485"/> $N^+ R_5 X^-$ or$$$

Z is $-C(O)-$ or a direct bond, wherein

if Z is $-C(O)-$, K_5 has the meaning of K_4 , and

if Z is a direct bond, K_5 is

$O-CH_2-CHOH-CH_2-N^+ R_5R_6 X^--[[(CH_2-CH_2)-(CH_2)_s-N^+ R_5R_6 X]_t-CH_2-CH_2-(CH_2)_s-N^+ R_5R_6R_7 X^-]_u, Q^+ X^-$,
 $-CH_2Q^+ X^-$ or $-CHCH_3Q^+ X^-$; and

$Q^+ X^-$ is  X^- or  X^- , and

R_7 is hydrogen, C_1 - C_{18} alkyl, C_3 - C_{12} cycloalkyl, phenyl or C_7 - C_9 phenylalkyl or C_6 - C_{10} heteroaryl,

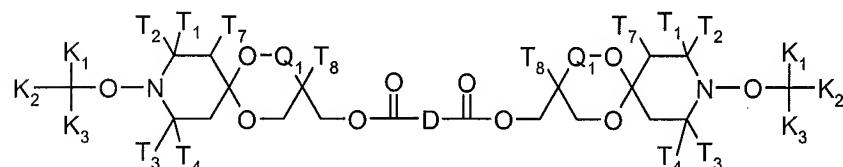
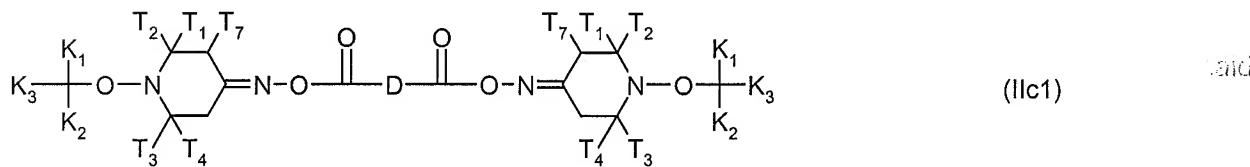
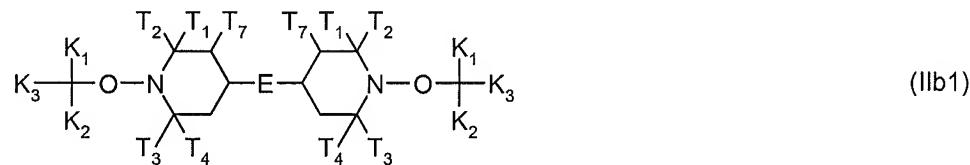
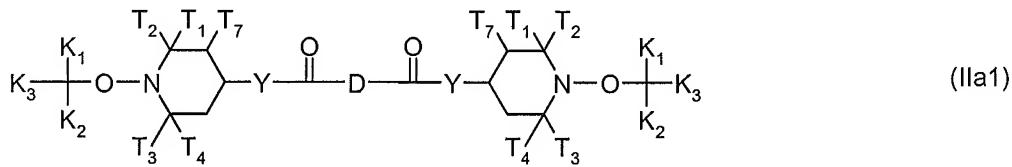
which all may be unsubstituted or substituted by halogen, OH, NO_2 , CN, C_1 - C_4 alkoxy, or

R_5 , R_6 and R_7 together with the nitrogen or phosphorous atom to which they are bonded form a 3-12 membered monocyclic or polycyclic ring which may contain further heteroatoms.

27. (new) A process for preparing a monomer/polymer clay nanocomposite dispersion comprising the steps of

- A) providing a first aqueous dispersion of a natural or synthetic clay which can be partially intercalated and/or exfoliated and wherein said clay has an exchangeable cation; adding to said dispersion a compound of formula IIa1, IIb1, IIc1 or IIId1 and exchanging said cation at least partially and
- B) adding to said dispersion at least one ethylenically unsaturated monomer and polymerizing at least a portion of said ethylenically unsaturated monomer,

wherein formula IIa1, IIb1, IIc1 and IIId1 are



wherein

Q₁ is a direct bond or CH₂;

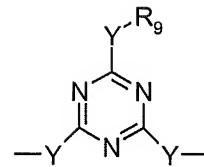
T₁ and T₃ are ethyl and T₂, T₄ and T₇ are methyl;

if Q₁ is a direct bond, T₈ is H; and

if Q₁ is CH₂, T₈ is methyl or ethyl;

D is a direct bond, C₁-C₁₂alkylene or phenylene;

E is $-\text{NR}_5-(\text{CH}_2)_x-\text{NR}_5-$ where x is 2 to 12 or a group



wherein Y is $=\text{NR}_9$;

K_1 is H, K_2 is methyl or ethyl and

K_3 is a group $-\text{CO}-\text{K}_4$ or

K_4 is $-\text{Y}-\text{CH}_2-\text{CH}_2-(\text{CH}_2)_s-\text{N}^+\text{X}^-\text{R}_5\text{R}_6\text{R}_7$ or $-\text{Y}-\text{CH}_2-\text{CHOH}-\text{CH}_2-\text{N}-\text{CH}_2-\text{CH}_2-(\text{CH}_2)_s-\text{N}^+\text{X}^-\text{R}_5\text{R}_6\text{R}_7$, where Y is O or NR_9 and s is a number from 0 to 2;

R_9 is hydrogen, $\text{C}_1\text{-C}_{18}$ alkyl, $\text{C}_3\text{-C}_{18}$ alkenyl, $\text{C}_3\text{-C}_{18}$ alkinyl, phenyl or $\text{C}_7\text{-C}_9$ phenylalkyl;

if K_3 is , Z is $-\text{CO}-$ or a direct bond;

if Z is $-\text{CO}-$, K_5 has the same meaning as K_4 ;

if Z is a direct bond, K_5 is a group $-\text{O}-\text{CH}_2-\text{CHOH}-\text{CH}_2-\text{N}-\text{CH}_2-\text{CH}_2-(\text{CH}_2)_s-\text{N}^+\text{X}^-\text{R}_5\text{R}_6\text{R}_7$ or $-\text{CH}_2\text{N}^+\text{R}_5\text{R}_6\text{R}_7\text{X}^-$;

and

X^- is the anion of a $\text{C}_1\text{-C}_{18}$ carboxylic acid which may contain more than one carboxylic acid group, fluoride, chloride, bromide, iodide, nitrite, nitrate, hydroxide, acetate, hydrogen sulfate, sulfate, $\text{C}_1\text{-C}_{18}$ alkoxy sulfate, aromatic or aliphatic sulfonate, carbonate, hydrogen carbonate, perchlorate, chlorate, tetrafluoroborate, borate, phosphate, hydrogen phosphate, dihydrogen phosphate or mixtures thereof.

28. (new) A process according to claim 26 wherein the ethylenically unsaturated monomer or oligomer is selected from the group consisting of styrene, substituted styrenes, conjugated dienes, acrolein, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles and (alkyl)acrylamides, vinyl halides and vinylidene halides or mixtures thereof.

29. (new) A process according to claim 27 wherein the ethylenically unsaturated monomer or oligomer is selected from the group consisting of styrene, substituted styrenes, conjugated dienes, acrolein, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles and (alkyl)acrylamides, vinyl halides and vinylidene halides or mixtures thereof.

30. (new) A monomer/polymer clay nanocomposite dispersion obtained by a process according to claim 26.

31. (new) A monomer/polymer clay nanocomposite dispersion obtained by a process according to claim 27.